

## Gas Metal *Rapid Arc* Welding Potential

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The article presents problems with commercial inverter source *Rapid Arc* application on fillet and V-grooved welds. Principal conditions of the process are explained and especially restriction due to source and feeder upper power limit is described. Case study of “weld design for fabrication” method was demonstrated, where type of weld and shape of groove is designed on the base of experimental results of process penetration behavior at ½ V-groove joint. Results are described and discussed, using special welding parameters monitoring equipment and software. A change of metal transfer behavior was recorded in accordance with torch angle setting and originally explained.

**Keywords:** GMAW, weld design for fabrication, *Rapid Arc*, stick-out, melting rate.

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